INDEX TO VOLUME 22–1987

Index to authors and contributors

ABRAMOVICH, H. *Paper* Evaluation of stiffened shell characteristics from imperfection measurements, 17
ALIABADI, M. H. *Paper* An improved boundary element formulation for calculating stress intensity factors: application to aerospace structures, 203

CARTWRIGHT, D. J. *Paper* An improved boundary element formulation for calculating stress intensity factors: application to aerospace structures, 203
CHARRIER, J.-M. *Paper* Free and constrained inflation of elastic membranes in relation to thermoforming – axisymmetric problems, 115
COLLE, A. R. *Paper* Elastostatic analysis of problems involving complex toroidal geometries, 195

DANIELS, M. J. *Paper* Enhancing finite element surface stress predictions: a semi-analytic technique for axisymmetric solids, 75
DAWE, D. J. *Paper* Experimental and finite element studies of circular cylindrical shells loaded radially through a central pad, 127
DOWLING, P. J. *Paper* Fabrication of small scale stiffened cyclindrical shells, 97
DRAGONI, E. *Paper* Design of an end face seal assembly for lubricated rotary joints, 37

EVANS, R. A. *Paper* Stress concentration factors due to axial loading of axisymmetric external projections on hollow tubes, 1
EVANS, W. T. *Paper* Application of holographic interferometry to cylinder deformation, 63

FESSLER, H. *Papers* An experimental technique for determining the flexibility of tubular joints in offshore structures, 7. A micropolariscope for automatic stress analysis, 25
FINDLAY, G. E. *Paper* An assessment of local radial loads on cylinders based on the Sanders linear shell equations, 139

GALLETLY, G. D. *Paper* Buckling of shallow torispherical domes subjected to external pressure – a comparison of experiment, theory, and design codes, 163
GANAPATHY, C, *Paper* Experimental studies to determine strain concentration factors for space tubular joints, 237
GLINKA, G. *Paper* The analysis of elastic stress distribution in threaded tether connections, 229
GRUNTMAN, S. *Paper* Elastic stress concentrations in a square plate with a large hole under uniaxial loading, 55

HARDING, J. E. *Paper* Fabrication of small scale stiffened cylindrical shells, 97
HARDY, S. J. *Paper* Stress concentration factors due to axial loading of axisymmetric external projections on hollow tubes, 1
HARRISON, A. *Paper* A failure model for corded composite plates with edge fractures, 49
HILLS, D. A. *Paper* Open cracks at or near free edges, 177
HYDE, T. H. *Paper* Stress concentration factors due to axial loading of axisymmetric external projections on hollow tubes, 1

KENNY, B. *Paper* Stress analysis of some nut–bolt connections with modifications to the external shape of the nut, 187
KITCHING, R. *Papers* Limit pressures for spherical vessels with radial branches of different protrusion lengths, 209. Limit pressure for a spherical vessel with a circumferential slot at its junction with a radial cylindrical protruding branch, 215
KRUZELECKI, J. *Paper* Buckling of shallow torispherical domes subjected to external pressure–a comparison of experiment, theory, and design codes, 163

LABOSSIERE, P. *Paper* On the determination of the strength parameters in the tensor polynomial failure criterion, 155
LIM, C. S. *Papers* Limit pressures for spherical vessels with radial branches of different protrusion lengths, 209. Limit pressure for a spherical vessel with a circumferential slot at its junction with a radial cylindrical protruding branch, 215
LITTLE, W. *Paper* An assessment of local radial loads on cylinders based on the Sanders linear shell equations, 139

MARSTON, R. E. *Paper* A micropolariscope for automatic stress analysis, 25
MOCKFORD, P. B. *Paper* An experimental technique for determining the flexibility of tubular joint in offshore structues, 7
MOFFAT, D. G. *Paper* Buckling of shallow torispherical domes subjected to external pressure – a comparison of experiment, theory, and design codes, 163
MORETON, D. N. *Paper* Alternating plasticity at the surfaces of a Bree cylinder subjected to in-phase and out-of-phase loading, 107

NANDAKUMAR, C. G. *Paper* Experimental studies to determine strain concentration factors for space tubular joints, 237
NEALE, K. W. *Paper* On the determination of the strength parameters in the tensor polynomial failure criterion, 155
NEWPORT, A. *Paper* The analysis of elastic stress distribution in threaded tether connections, 229
NG, H. W. *Paper* Alternating plasticity at the surfaces of a Bree cylinder subjected to in-phase and out-of-phase loading, 107
NOWELL, D. *Paper* Open cracks at or near free edges, 177

OLLERTON, E. *Paper* A micropolariscope for automatic stress analysis, 25

PATTERSON, E. A. *Paper* Stress analysis of some nut – bolt connections with modifications to the external shape of the nut, 187
PICKARD, A. C. *Paper* The prediction of stress rupture life of notched speciments in the beta-processed titanium alloy Ti5331s, 145

REDEKOP, D. *Paper* Elastostatic analyis of problems involving complex toroidal geometries, 195
RICHARDS, T. H. *Paper* Enhancing finite element surface stress predictions; a semi-analytic technique for axisymmetric solids, 75
ROBINSON, M. *Papers* Limit pressures for spherical vessels with radial branches off different protrusion lengths, 209. Limit pressure for a spherical vessel with a circumferential slot at its junction with a radial cylindrical protruding branch, 215
ROOKE, D. P. *Paper* An improved boundary element formulation for calculating stress intensity factors: application to aerospace structures, 203
RUSSEL, R. M. *Paper* Application of holographic interferometry to cylinder deformation, 63

SCOTT, N. D. *Paper* Fabrication of small scale stiffened cylindrical shells, 97
SHILKRUT, D. *Paper* Elastic stress concentrations in a square plate with a large hole under uniaxial loading, 55
SHRIVASTAVA, S. *Paper* Free and constrained inflation of elastic membranes in relation to thermoforming – axisymmetric problems, 115
SINGER, J. *Paper* Evaluation of stiffened cyclindrical shell characteristics from imperfection measurements, 17
SMART, J. *Paper* On the determination of boundary stresses in finite elements, 87
SRIVASTAVA, S. K. *Paper* Experimental studies to determine strain concentration factors for space tubular joints, 237
STROZZI, A. *Paper* Design of an end face seal assembly for lubricated rotary joints, 37
SUNDARAVADIVELU, R. *Paper* Experimental studies to determine strain concentration factors for space tubular joints, 237

TAN, C. L. *Paper* Elastostatic analyis of problems involving complex toroidal geometries, 195
TIMMINS, W. *Paper* An assessment of local radial loads on cylinders based on the Sanders linear shell equations, 139
TOPP, D. A. *Paper* The analysis of elastic stress distribution in threaded tether connections, 229.

UCMAKLIOGLU, M. *Paper* Experimental and finite element studies of circular cylindrical shells loaded radially through a central pad, 127
UZIEL, A. *Paper* Elastic stress concentrations in a square plate with a large hole under uniaxial loading, 55

WARRINGTON, B. *Paper* Buckling of shallow torispherical domes subjected to external pressure – a comparison of experiment, theory, and design codes, 163
WEBSTER, J. J. *Paper* An experimental technique for determining the flexibility of tubular joint in offshore structures, 7
WEBSTER, P. S. *Paper* The prediction of stress rupture life of notched specimens in the beta-processed titanium alloy Ti5331s, 145
WHITE, A. *Paper* Application of holographic interferometry to cylinder deformation, 63
WU, R. *Paper* Free and constrained inflation of elastic membranes in relation to thermoforming– axisymmetric problems, 115
YAFFE, R. *Paper* Evaluation of stiffened shell characteristics from imperfection measurements, 17

Subject Index

A FAILURE MODEL FOR CORDED COMPOSITE PLATES WITH EDGE FRACTURES, *Paper*, 49
A MICROPOLARISCOPE FOR AUTOMATIC STRESS ANALYSIS, *Paper*, 25
Aerospace structures, 203
ALTERNATING PLASTICITY AT THE SURFACES OF A BREE CYLINDER SUBJECTED TO IN-PHASE AND OUT-OF-PHASE LOADING, *Paper*, 107
AN ASSESSMENT OF LOCAL RADIAL LOADS ON CYLINDERS BASED ON THE SANDERS LINEAR SHELL EQUATIONS, *Paper*, 139
AN EXPERIMENTAL TECHNIQUE FOR DETERMINING THE FLEXIBILITY OF TUBULAR JOINTS IN OFFSHORE STRUCTURES, *Paper*, 7
AN IMPROVED BOUNDARY ELEMENT FORMULATION FOR CALCULATING STRESS INTENSITY FACTORS: APPLICATION TO AEROSPACE STRUCTURES, *Paper*, 203
Analysis:
  elastostatic, 195
  stress, of some nut – bolt connections, 187
APPLICATION OF HOLOGRAPHIC INTERFEROMETRY TO CYLINDER DEFORMATION, *Paper*, 63
Assessment of local radial loads on cylinders, 139
Automatic stress analysis, micropolariscope for, 25
Axial loading of axisymmetric external projections on hollow tubes, 1
Axisymmetric external projections on hollow tubes, axial loading of, 1
Axisymmetric problems in the free and constrained inflation of elastic membranes in relation to thermoforming, 115
Axisymmetric solids, a semi-analytic technique for enhancing finite element surface stress predictions, 75

Beta-processed titanium alloy Ti5331s, 145
Boundary element formulation, improved, for calculating stress intensity factors, 203
Boundary stresses, determination of, 87
Branches, radial, 209
Bree cylinder, 107
BUCKLING OF SHALLOW TORISPHERICAL DOMES SUBJECTED TO EXTERNAL PRESSURE – A COMPARISON OF EXPERIMENT, THEORY, AND DESIGN CODES, *Paper*, 163

Circular cylindrical shells loaded radially through a central pad, 127
Complex toroidal geometries, elastostatic analysis of problems involving, 195
Composite plates, corded, with edge fractures, 49
Connections:
  nut – bolt, 187
  threaded tether, 229
Crack, open, 177
Cylinder deformation, 63
Cylinders, local radial loads on, 139
Cylindrical protruding branch, radial, 215
Cylindrical shells:
  circular, 127
  stiffened, 97

Deformation, cylinder, 63
Design Codes, 163
DESIGN OF AND END FACE SEAL ASSEMBLY FOR LUBRICATED ROTARY JOINTS, *Paper*, 37
Determination of the strength parameters in the tensor polynomial failure criterion, 155
Domes, torispherical, 163

Edge fractures in corded composite plates, 49
Edges, free, 1977
Elastic membranes, free and constrained inflation of, 115
Elastic stress distribution in threaded tether connections, 229
ELASTIC STRESS DISTRIBUTIONS IN A SQUARE PLATE WITH A LARGE HOLE UNDER UNIAXIAL LOADING, *Paper*, 55
ELASTOSTATIC ANALYSIS OF PROBLEMS INVOLVING COMPLEX TOROIDAL GEOMETRIES, *Paper*, 195
End face seal assembly for lubricated rotary joints, 37
ENHANCING FINITE ELEMENT SURFACE STRESS PREDICTIONS: A SEMI-ANALYTIC TECHNIQUE FOR AXISYMMETRIC SOLIDS, *Paper*, 75
EVALUATION OF STIFFENED SHELL CHARACTERISTICS FROM IMPERFECTION MEASUREMENTS, *Paper* 17
EXPERIMENTAL AND FINITE ELEMENT STUDIES OF CIRCULAR CYLINDRICAL SHELLS LOADED RADIALLY THROUGH A CENTRAL PAD, *Paper*, 127
EXPERIMENTAL STUDIES TO DETERMINE STRAIN CONCENTRATION FACTORS FOR SPACE TUBULAR JOINTS, *Paper*, 237
Experimental technique for determining the flexibility of tubular joints in offshore structures, 7
External projections, axisymmetric, on hollow tubes, 1

FABRICATION OF SMALL SCALE STIFFENED CYLINDRICAL SHELLS, *Paper*, 97
Failure criterion, 155
Failure model for corded composite plates, 49
Finite element, 75, 87, 127
Finite element studies of circular cylindrical shells loaded radially through a central pad, 127
Finite element surface stress predictions, 75
Flexibility of tubular joints in offshore structures, 7
FREE AND CONSTRAINED INFLATION OF ELASTIC MEMBRANES IN RELATION TO THERMOFORMING – AXISYMMETRIC PROBLEMS, *Paper*, 115
Free edges, 177

Hollow tubes, 1
Holographic interferometry, application to cylinder deformation, 63

Imperfection measurements, 17
In-phase loading, 107
Inflation of elastic membranes, free and constrained, 115
Interferometry, holographic, 63

Joints:
  rotary, 37
  space tubular, 127
  tubular, 7

LIMIT PRESSURE FOR A SPHERICAL VESSEL WITH A CIRCUMFERENTIAL SLOT AT ITS JUNCTION WITH A RADIAL CYLINDRICAL PROTRUDING BRANCH, *Paper*, 215
LIMIT PRESSURES FOR SPHERICAL VESSELS WITH RADIAL BRANCHES OF DIFFERENT PROTRUSION LENGTHS, *Paper*, 209
Loading;
  axial, 1
  in-phase, 107
  out-of-phase, 107
  uniaxial, 55
Loads, radial, 139
Local radial loads on cylinders, an assessment of, 139
Lubricated rotary joints, end face seal assembly for, 37

Membranes, elastic, 115
Micropolariscope for automatic stress analysis, 25

Notched specimens in the beta-processed titanium alloy Ti5331s, prediction of stres rupture life of, 145
Nut – bolt connections, 187
Nut, shape of, 187

Offshore structures, 7
ON THE DETERMINATION OF BOUNDARY STRESSES IN FINITE ELEMENTS, *Paper*, 87
ON THE DETERMINATION OF THE STRENGTH PARAMETERS IN THE TENSOR POLYNOMIAL FAILURE CRITERION, *Paper*, 155
OPEN CRACK AT OR NEAR FREE EDGED, *Paper*, 177
Out-of-phase loading, 107

Plasticity, 107
Plate, square, with a large hole, under uniaxial loading, 55
Plates, corded composite, with edge fractures, 49
Prediction of stress rupture life, 145
Pressure, limit, 215
Projections, external, on hollow tubes, 1
Protruding branch, cylindrical, 215

Radial branches, spherical vessels with, 209
Radial cylindrical protruding branch, 215
Radial loading, 127
Radial loads, local, 139
Rotary joints, lubricated, 37

Sanders linear shell equations, 139
Seal assembly, end face, for lubricated rotary joints, 37
Shallow torispherical domes, buckling of, 163
Shells:
  cylindrical, 97, 127
  stiffened, 17
Slot, circumferential, 215
Small scale stiffened cylindrical shells, fabrication of, 97
Solids, axisymmetric, 75
Space tubular joints, 237
Square plate with a large hole under uniaxial loading, elastic stress concentrations in, 55
Stiffened cylindrical shells, small scale, 97
Stiffened shell characteristics, evaluation of, 17
Strain concentration factors for space tubular joints, 237
Strength parameters, determination of, in the tensor polynomial failure criterion, 155
Stress;
  elastic, 229
  surface, 75
Stress analysis, 187
  automatic, 25
STRESS ANALYSIS OF SOME NUT – BOLT CONNECTIONS WITH MODIFICATIONS TO THE EXTERNAL SHAPE OF THE NUT, *Paper*, 187
Stress concentration factors, 1
STRESS CONCENTRATION FACTORS DUE TO AXIAL LOADING OF AXISYMMETRIC EXTERNAL PROJECTIONS ON HOLLOW TUBES, *Paper*, 1
Stress concentrations, elastic, 55
Stress intensity factors, 203
Stress rupture life of notched specimens in the beta-processed titanium alloy Ti5331s, 145
Stresses, boundary, in finite elements, 87
Structures:
  aerospace, 203
  offshore, 7
Surface stress predictions, finite element, 75

Tensor polynomial criterion, determination of the strength parameters in, 155
THE ANALYSIS OF ELASTIC STRESS DISTRIBUTION IN THREADED TETHER CONNECTIONS, *Paper*, 229
THE PREDICTION OF STRESS RUPTURE LIFE OF NOTCHED SPECIMENS IN THE BETA-PROCESSED TITANIUM ALLOY Ti5331s, 145
Thermoforming, 115
Threaded tether connectionw, 229
Titanium alloy Ti5331s, 145
Torispherical domes, shallow, 163
Toroidal geometries, complex, 195
Tubes, hollow, 1
Tubular joints, flexibility of, 7

Uniaxial loading, square plate with a large hole under, 55

Vessel, spherical, 209, 215